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UNITED STATES DEPARTMENT OF AGRICULTURE  
Bureau of Entomology and Plant Quarantine  
Washington, D. C.

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1942, Reserve Results of the 1942 trap-scouting to secure information on the distribution and possible status of the Japanese beetle in localities outside the area regulated by Federal quarantine are summarized in the attached statement. As a part of this report there is included a list of all the localities outside the regulated area where trap-scouting was carried on and beetles found during the current or preceding seasons. This list records the results for the years 1931-1942, inclusive.

There was a notable reduction in infestation in a number of large cities where soil treating programs have been carried on for a period of years. Pronounced reductions were observed in Atlanta, Ga., Chicago and Highland Park, Ill., Indianapolis, Ind., Detroit, Mich., St. Louis, Mo., and in a number of North Carolina and Ohio communities. Infestations in many of these cities have reached a new low, indicating that repeated soil treating programs have become increasingly effective.

Infestations discovered through the trapping in Florida, Georgia, Kentucky, and Tennessee were of negligible proportions, and soil treating was not deemed necessary.

Applications of lead arsenate to the sites of established infestations in Illinois, Indiana, Michigan, Missouri, North Carolina, Ohio and South Carolina either have been completed or are definitely scheduled. Soil treating has also been finished in Newark, N. Y., and similar treatments are under discussion in Avon, Jamestown, Niagara Falls and Waterloo. If such treatments are not completed in the spring of 1943, these localities will come under consideration as possible additions to the regulated zone. Fulton, Oswego and Silver Creek are listed for inclusion in the regulated zone under a revision of area soon to be issued.

In addition, extensions of the area under regulation for the insect are under consideration to include important, untreated infestations in Maryland, Pennsylvania, Virginia, and West Virginia.

Satisfactory treatment of infestations in non quarantined States or assurance that such work will be undertaken in the spring of 1943, avoids the necessity of holding a hearing or conference to consider the extension of the regulated area or modifications of the regulations in advance of the forthcoming revision. The accompanying statement is issued in lieu of the report that might be presented at such a conference. It will make available to State plant quarantine officials and other interested parties the latest information on the distribution and status of the Japanese beetle in areas not now included under Federal quarantine.

P. N. ANNAND

Chief of Bureau



## JAPANESE BEETLE TRAPPING AND CONTROL OPERATIONS DURING 1942

Several factors were responsible for a 30 percent reduction in the number of traps operated in 1942 as compared to 1941. Coated sheet metal for manufacturing new traps was in such demand for purposes related to the war effort that none was purchased. The only parts purchased were new wire bail. Traps used in 1942 were those that could be reclaimed from the larger number available in 1941. There was considerable difficulty in obtaining bait. Geraniol, the principal ingredient, was finally purchased at \$2.20 per pound, as compared with 49 $\frac{1}{2}$ ¢ per pound in 1941. This increased price was for a lower grade, based on emergency specifications. The daily wage of trap inspectors was also increased from \$4.00 to \$4.50 at the beginning of the season.

These increased costs decreased the amount of work that could be performed, consequently, instead of the 1941 program, using 78,509 traps in 462 localities in 39 States, the 1942 program was confined to the placement of 55,354 traps in 242 cities and towns in 17 States. With this restricted program, trapping sites were selected where there was the most likelihood of beetle spread. All localities outside the regulated areas in which incipient or established infestations were known to exist were included in the trapping program.

In reducing the program, distribution of small lots of traps to the Bureau's field stations throughout the country was abandoned for the season. In addition, the usual plan for trap operation in control areas such as St. Louis, Detroit and Indianapolis was modified by temporarily discontinuing trapping in sections previously treated with lead arsenate. Trapping was also curtailed in other areas that had been trapped for several successive years with negative results. This concentrated the traps in sections where they would be most effective. Thus, while the number of traps operated under this plan was considerably less than last year, the effectiveness of the program was not reduced proportionately.

Beetles were captured in 122 of the trapped communities. Thirty-three of these were first-record finds. Of the 122 infestations, 71 were of a few scattered beetles each. The remaining 51 infestations were of such proportions as to indicate establishment of the insect in these localities. These 51 cities and towns are those in which soil treatments have been or are to be completed, or are under consideration for quarantining.

All trapping in 7 localities in Maine, and 3 cities in Wisconsin was with negative results. In Florida, Georgia, Kentucky, Tennessee and Vermont, the few infestations determined this season were relatively unimportant and soil treatments were not urged in these States.

Maryland State trapping for Japanese beetle control was again carried on, with 31,924 traps operated. Beetles captured in cities and towns totalled 43,740,561, or 4,374 tons. Most of these were caught within the present regulated area. Beetles were trapped in varying numbers in 17 cities and towns outside the infested zone. The Federally-regulated area will be extended to include all remaining nonregulated area of the State except the southernmost section of the Western Shore and two small areas in the westernmost counties.

An infestation in a borough adjoining the Erie, Pa. isolated area will be added to the present regulated area in the State.

Trapping was with positive results in 15 Virginia cities and towns. Nine of these are negligible in scope. Material for soil treating in Woodstock has been purchased by the State, and there are good prospects of treatments being applied in Harrisonburg. Radford and West Point, along with Pulaski and Roanoke, the latter two places already included in the State's Japanese beetle quarantine, will be added to the Federally-regulated area.

Extension of the Federally-regulated area in West Virginia to include four established infestations, with action deferred in respect to four minor infestations in the State, has already been proposed by the cooperating State official.

In view of the control programs already initiated by the several States, quarantine extension this year will be nominal, and will be confined to a few localities each in Maryland, New York, Pennsylvania, Virginia and West Virginia.

#### Cooperating State Soil Treating

There was some delay in getting soil treating work under way in some areas due to the lack of lead arsenate earlier in the season. At the direction of the war agencies of the Government, the manufacturers had devoted their equipment to the production of calcium arsenate, principally for boll weevil control. Promptly at the end of that effort the switch-over to lead arsenate manufacture took place.

Trap collections in Missouri were the fewest in years. To protect this already favorable situation there, the State has treated 7.3 acres in St. Louis, and has amended its State quarantine to add the few new sections in the city in which scattered beetles were found outside previously treated blocks.

North Carolina's soil treating and inoculation program of 1942 extended to all infestations of major importance in the State. Lead arsenate was applied to 292.5 acres in 11 localities. In three other cities, milky disease inoculations in open pasture lands are planned. Small, scattered infestations of minor importance occurred at 9 other points. Asheville will retain its present status as a separate control area under State quarantine. The State Japanese beetle quarantine was amended on September 1, 1942 to include several infestations discovered during the summer in unquarantined sections. The State's treating program, supplemented with a system of inspection paralleling the Federal regulations but performed under State authority, is believed adequate to cope with the situation as it has developed this year.

Treatments were continued in Newark, N. Y. this year, with a coverage of 30.9 acres. Discussions are in progress with New York State authorities concerning methods to be pursued in handling four infestations of an established nature outside the present regulated area. Conferences are being held by State and municipal authorities in these communities to determine whether funds for purchasing lead arsenate and labor can be provided. If soil treatments are not undertaken, addition of these communities to the regulated area is anticipated. Thirteen of the New York infestations are of such a scattered nature that no treatment is required.

Soil treatments in Ohio were begun the latter part of September. This year's soil treatments in Ohio were the most extensive thus far undertaken by that State. Over 400 acres were included in the treatments in 18 cities and towns. Exclusive of two finds of solitary beetles each and an infestation that is located in such proximity to the West Virginia regulated area that it is more practicable to add it to the regulated area than to treat, this control program included every infestation found in the State during 1942.

Indications are that in South Carolina there are two well established infestations, in addition to finds of solitary beetles in each of 4 other cities. State funds have been allotted for the purchase of material for soil treating and it is anticipated that the work will proceed early this winter.

Soil treatments got under way in Chicago, Ill on September 8 to take care of the beetles caught outside previously treated areas in that city. At the completion of the Chicago work, treatments proceeded in Highland Park. Twenty acres were treated in Highland Park, and 46 4 acres in Chicago. These are the only two infestations of importance in Illinois. Solitary beetles were trapped in three other localities.

Lead arsenate was also applied to the only two important infestations discovered in Indiana this year. In Logansport, 5 7 acres were treated, and in Richmond 18 9 acres. Five other minor infestations are all of a few scattered beetles each.

Michigan's soil treating program has been completed for a total of 99 2 acres. All infestations discovered in the State, irrespective of size or concentration, were treated. The only infestations of an established nature are those in Detroit and Flint.



JAPANESE BEETLE TRAPPING  
OUTSIDE PRESENT REGULATED AREA  
1930 - 1942

POSITIVE RESULTS

Location	1942		1941		1940		1939		1938		1937		1936		1935		1934		1933		1932		
	Traps	J.B.	Traps	J.B.																			
<b>FLORIDA</b>																							
Jacksonville	295	1	600	-	600	5	12	-	12	-	792	-	-	-	-	-	-	-	-	-	400	-	
Miami	300	1	300	-	600	1	12	-	12	-	778	-	-	-	-	-	-	-	-	-	400	-	
Tampa	300	-	600	-	600	1	-	-	-	-	796	-	-	-	-	-	-	-	-	-	400	-	
<b>GEORGIA</b>																							
Atlanta*	1025	4	2369	24	3109	32	3200	40	3033	122	1487	6	396	-	-	-	-	-	-	-	400	-	
Augusta	300	5	-	64	2	50	17	400	-	-	392	1	-	-	-	-	-	-	-	-	400	-	
Chamblee	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
East Point	100	4	350	1	440	137	400	142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gainesville	100	-	300	-	200	2	-	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-	
Jonesboro	-	-	-	-	85	-	60	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-	
Savannah*	297	-	-	-	12	-	298	-	12	1	800	-	395	1	-	-	-	-	-	-	400	-	
Toccoa	50	3	100	-	123	2	92	-	-	-	100	-	-	-	-	-	-	-	-	-	-	-	
*Atlanta 1931 24 Traps 0 J.B.																							
*Savannah 1931 300 Traps 0 J.B.																							
<b>ILLINOIS</b>																							
Bloomington	200	1	300	1	10000	462	9838	549	9926	330	9980	384	7500	3740	3065	39	1038	6	-	-	-	-	
Chicago	7550	170	9200	407	-	462	9838	549	9926	330	9980	384	-	-	-	-	-	-	-	-	-	-	
Cicero	-	400	-	800	-	-	800	24	600	5	400	1	-	-	-	-	-	-	-	-	-	-	
East St. Louis	599	1	600	10	800	5	800	24	800	1	1234	3	1102	2	1060	3	804	1	-	-	-	-	
Elgin	-	300	-	-	-	-	-	385	-	388	-	-	-	-	-	-	-	-	-	-	-	-	
Evanston	400	-	400	-	800	-	800	16	600	1	400	20	-	-	-	-	-	-	-	-	-	-	
Highland Park	600	173	1100	5608	-	-	-	-	200	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hinwood	200	1	-	-	-	-	-	-	600	-	800	-	-	-	-	-	-	-	-	-	-	-	
Oak Park	-	300	-	300	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
*Chicago 1931 300 Traps 0 J.B.																							
<b>INDIANA</b>																							
Bedford	99	-	240	1	-	250	-	300	3	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bluffton	-	-	-	-	-	-	-	300	3	-	-	-	-	-	-	-	-	-	-	-	-	-	
East Chicago	-	-	-	-	-	-	-	300	1	400	-	-	-	-	-	-	-	-	-	-	-	-	
Erlkhart	289	6	392	3	299	77	316	5	300	1	-	-	-	-	-	-	-	-	-	-	-	-	
Fort Wayne	596	4	1236	5	1200	52	1600	105	1600	20	800	18	399	5	-	-	-	-	-	-	-	-	
Hammond	400	8	324	3	300	-	50	3	400	-	400	-	-	-	-	-	-	-	-	-	-	-	
Indianapolis	1195	7	2514	21	2700	160	3280	75	3600	10	3500	12	3500	28	2434	57	792	17	-	-	-	-	
Logansport	300	9	317	5	313	13	400	98	400	8	500	1	-	-	-	-	-	-	-	-	-	-	
Muncie	-	-	195	-	-	-	400	1	-	-	400	-	-	-	-	-	-	-	-	-	-	-	
Newcastle	200	-	200	-	200	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Richmond	298	556	327	4	300	7	400	1	-	-	400	-	398	-	-	-	-	-	-	-	48	-	
South Bend	-	1126	-	1200	12	1600	-	1600	8	800	43	400	3	-	-	-	-	-	-	-	-	-	
Terre Haute	400	1	430	18	-	-	-	-	-	-	397	-	-	-	-	-	-	-	-	-	-	-	
Warsaw	100	-	195	2	194	60	300	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Whiting	400	-	300	1	300	4	250	18	100	1	200	-	-	-	-	-	-	-	-	-	-	-	
<b>IOWA</b>																							
Ft. Madison	-	-	-	-	-	-	200	-	200	1	-	-	-	-	-	-	-	-	-	-	-	-	
<b>KENTUCKY</b>																							
Lexington	274	1	1223	1	1200	4	1600	13	1566	62	391	1	400	1	2	-	-	-	-	-	-	-	
Louisville	590	-	-	-	-	-	-	-	1566	10	800	2	-	-	-	-	-	-	-	-	-	-	
<b>MAINE</b>																							
Augusta	-	-	-	-	-	-	325	9	400	5	200	3	-	253	-	200	1	204	1	296	7	148	1
Bangor	-	-	-	-	-	-	95	4	-	200	3	-	301	-	293	1	204	1	388	7	200	-	
Bar Harbor	-	-	-	-	-	-	-	-	-	200	2	-	172	-	120	1	201	-	-	-	-	-	
Bath	-	-	-	-	-	-	-	-	-	200	1	-	145	-	203	-	202	-	-	-	-	-	
Brunswick	-	-	-	-	-	-	-	-	-	200	1	-	71	-	84	-	120	-	60	-	-	-	
Ellsworth	-	-	-	-	-	-	115	-	100	1	-	125	-	72	-	-	-	-	-	-	-	-	
<b>MARYLAND</b>																							
Baltimore	12	91	-	-	-	-	-	-	-	-	10	-	10	1	-	-	-	-	-	-	-	-	
Beverly Beach	70	206	-	-	-	-	-	-	-	-	10	-	10	1	-	-	-	-	-	-	-	-	
Big Pool	-	-	15	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chaptico	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chesapeake Beach and North Beach	138	1015	200	60	200	228	-	33	-	-	10	1	10	-	-	-	-	-	-	-	-	-	
Davidsonville	10	84	-	-	-	-	-	-	-	-	10	-	10	-	-	-	-	-	-	-	-	-	
Galesville	25	9	-	-	-	-	-	-	-	-	102	-	-	24	-	25	1	24	2	-	-	304	
Hancock	150	60	150	8	100	10	-	-	64	-	10	-	14	-	20	-	20	1	20	2	-	-	
Hughesville	50	18	-	-	-	-	-	-	-	-	10	3	-	-	-	-	-	-	-	-	-	-	
Kenwood Beach	-	-	-	-	-	-	-	-	-	-	192	-	10	-	20	-	25	3	25	-</td			

JAPANESE BEETLE TRAPPING  
1930 - 1942

-2-

JAPANESE BEETLE TRAPPING  
1930 - 1942

-3-

Location	1942		1941		1940		1939		1938		1937		1936		1935		1934		1933		1932		
	Traps	J.B.																					
OHIO																							
Ashtabula	300	38	340	108	299	53	400	97	397	126	212	129	299	-	103	-	100	-	216	-	250	-	
Athens	-	-	198	-	100	1	-	-	-	-	198	-	-	-	-	-	-	-	-	-	-	-	
Bellefontaine	125	218	-	-	102	191	100	124	36	9	12	-	-	-	-	-	-	-	-	-	-	-	
Belpre	100	66	100	94	102	191	100	124	36	9	12	-	-	-	-	-	-	-	-	-	-	-	
Bucyrus	100	-	200	5	200	3	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Caldwell	98	1	25	1	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chillicothe	297	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cincinnati	-	-	877	-	-	-	-	-	1200	-	950	1	978	1	171	1	132	-	396	-	400	-	
Conneaut	303	32	365	159	300	371	200	184	196	13	200	1	200	6	95	2	100	-	-	-	-	-	
East Conneaut	95	120	-	91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Crestline	100	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Elyria	200	-	300	1	299	1	400	2	-	-	400	-	-	-	-	-	-	-	-	-	-	-	
Gallipolis	295	2520	200	444	200	769	200	217	197	20	199	12	100	7	-	-	-	-	-	-	-	-	
Lancaster	195	-	-	-	200	-	-	-	-	-	-	-	280	-	300	2	-	-	-	-	-	-	
Lorain	296	2	-	-	-	-	400	-	-	-	396	-	-	-	-	-	-	-	-	-	-	-	
Lunken Airport (Cincinnati)	100	3	31	1	-	-	-	-	48	260	19	284	45	300	121	200	12	-	-	196	-	-	
Marietta	199	126	300	10	300	38	300	-	-	-	-	-	387	45	400	121	400	12	-	204	-	-	
Marion	300	28	-	-	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Millersburg	100	-	50	1	42	-	171	-	99	-	-	-	-	-	-	-	-	-	-	-	-	-	
Mt. Vernon	200	5	85	-	200	-	-	-	199	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nelsonville	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
New Concord	97	6	25	1	35	1	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Norwalk	200	1	55	-	100	1	200	-	97	-	-	-	-	-	-	-	-	-	-	-	-	-	
Rockbridge	35	167	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sandusky	199	-	-	-	-	-	100	-	12	1	382	-	200	-	-	-	-	-	-	-	-	-	
So. Zanesville	100	318	175	1076	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	132	-	-	
Tiffin	300	1	300	-	-	-	-	-	-	-	200	-	-	-	-	-	-	-	-	-	-	-	
Van Wert	100	-	321	1	-	-	-	-	-	-	196	-	-	-	-	-	-	-	-	-	-	-	
Washington C.H.	-	-	-	-	-	-	-	-	-	-	198	-	-	-	-	-	-	-	-	125	-	-	
Zanesville	200	5	298	1	300	23	200	5	-	-	398	-	400	-	396	1	132	-	198	1	246	1	
* Cincinnati 1931 - 300 Traps 0 J.B.																							
PA. PENNSYLVANIA																							
Greenville	-	-	300	5	300	2	200	1	-	-	100	-	195	-	-	-	-	-	-	92	-	392	-
Leesville	-	-	400	51	400	16	400	7	-	-	198	-	300	-	-	-	-	-	-	92	-	392	-
Marsville	100	13	100	5	65	1	-	-	-	-	41	-	-	-	-	-	-	-	-	-	-	-	
SOUTH CAROLINA																							
Charleston	255	1	300	5	300	12	-	-	794	2	783	2	730	11	755	-	-	-	-	800	-	400	-
Columbia	399	1	-	-	-	-	-	-	-	-	792	-	800	-	552	-	-	-	-	-	125	-	-
Florence	100	43	200	7	200	8	12	-	12	12	297	-	300	-	306	-	225	1	201	2	-	-	
Greenville	300	16	596	18	900	12	800	5	765	6	750	1	794	33	799	89	204	2	396	1	-	-	
Spartanburg	300	1	300	1	-	-	-	-	-	-	398	-	399	-	400	-	-	-	200	-	193	-	
Sumter	200	1	-	-	-	-	-	-	-	-	-	-	200	-	200	-	-	-	-	12	-	-	
* Charleston, 1931 - 300 Traps 4 J.B.																							
TELEGRAMS																							
Bristol	131	2	-	-	-	-	200	-	172	-	151	-	175	4	-	-	-	-	-	-	-	-	-
VERMONT																							
Barre	192	17	293	21	10	-	12	-	12	-	26	-	200	-	-	-	-	-	-	204	-	-	-
Montpelier	196	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	192	-	-	-	
VIRGINIA																							
Ashland	-	-	100	9	100	7	30	3	29	-	60	-	50	1	100	7	102	-	100	4	42	-	
Berryville	147	7	-	-	-	-	200	-	186	4	145	2	125	1	-	-	-	-	175	-	-	-	
Frigat	-	-	-	-	-	-	-	-	99	-	100	1	100	-	-	-	-	-	150	-	-	-	
Blacksburg	-	-	-	-	-	-	-	-	-	84	6	-	100	1	-	-	-	-	146	-	-	-	
Blacksburg	10	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Courtland (South-Courtland County)	-	-	5	-	20	1	-	-	-	-	10	-	10	-	-	-	-	-	-	-	-	-	
Dayton	20	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Franklin (South-Franklin County)	100	18	35	1	43	5	-	-	199	6	197	1	200	-	200	2	228	-	196	1	178	2	
Harrisonburg	100	18	40	4	200	5	-	-	130	1	200	-	200	-	200	1	180	1	40	1	47	1	
Luray	95	7	20	1	10	1	400	-	44	1	789	-	393	-	394	-	192	-	396	-	400	-	
Lynchburg	-	-	300	-	-	-	22	1	17	3	10	-	5	-	-	-	-	-	-	-	-	-	
Madison	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Mineral	12	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Mt. Jackson	45	1	10	1	10	-	-	-	8	-	-	-	-	-	-	-	-	-	12	-	-	-	
New Market	45	2	14	1	20	-	-	25	-	30	3	30	-	25	-	25	-	25	-	48	1	24	1
Orange	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	-	-	
Pulaski	100	285	-	-	-	-	-	-	-	-	90	31	150	29	143	14	-	-	-	200	-	-	-
Radford	100	91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	161	-	-	-	
Rappahannock	-	-	-	-	-	-	-	-	18	1	-	-	757	38	800	16	406	28	204	9	396	7	
Roanoke	326	1233	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	400	23	
Salem	87	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41	-	-	-	
South Hill	92	-	10	-	30	-																	

JAPANESE BEETLE TRAPPING

1930 - 1942

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